



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,768	01/25/2007	Ryoichi Tsunori	295235US0PCT	4631
22850	7590	06/11/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.			CHOI, LING SIU	
1940 DUKE STREET				
ALEXANDRIA, VA 22314			ART UNIT	PAPER NUMBER
			1796	
NOTIFICATION DATE	DELIVERY MODE			
06/11/2009	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/594,768	Applicant(s) TSUNORI ET AL.
	Examiner Ling-Siu Choi	Art Unit 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 September 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-16 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1448)
Paper No(s)/Mail Date 05/22/2008, 12/28/2006

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

1. This Office Action is in response to the Preliminary Amendment filed 09/29/2006. Claims 15-16 have been added and Claims 1-16 are now pending, wherein claims 1-4 are drawn to a multistage propylene-based polymer; claims 5-6 are drawn to a method to produce the multistage propylene-based polymer; claims 7-10 are drawn to a propylene-based resin composition; claims 11-13 and 15 are drawn to a formed product; and claims 14 and 16 are drawn to a composite material.

Claim Analysis

2. Summary of Claim 1:

A multistage propylene-based polymer comprising components (A) and (B):		
A	5 to 20 wt%	a propylene homopolymer component or a copolymer component of propylene and a C ₂₋₈ α -olefin having an intrinsic viscosity $[\eta]$ of more than 10 dL/g in tetralin at 135°C;
B	80 to 95 wt%	a propylene homopolymer component or a copolymer component of propylene and a C ₂₋₈ α -olefin having an intrinsic viscosity $[\eta]$ of 0.5 to 3.0 dL/g in tetralin at 135°C.

Claim Rejections

3. **The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 102

5. Claims 1, 5-6, 11-13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (WO 98/45368).

Saito et al. disclose a propylene homopolymer or a propylene-olefin copolymer composition comprising (a) 0.01 to 5 weight parts [0.01-5%] of a propylene homopolymer or a propylene-olefin copolymer having an **intrinsic viscosity** [η_a] of 15 to 100 dl/g measured in tetralin at 135°C; and (b) 100 weight parts [95 -100 %] of a propylene homopolymer or a propylene-olefin copolymer having an **intrinsic viscosity** [η_b] of 0.2 to 10 dl/g measured in tetralin at 135°C, wherein the propylene

homopolymer or propylene-olefin copolymer composition is obtained in the presence of a catalyst comprising Catalyst Component (1): a titanium trichloride composition obtained by reacting **titanium tetrachloride** with either an organic aluminum compound or a reaction product of the organic aluminum compound and an electron donor to form a solid product, and then reacting the product with an electron donor and an electron acceptor; Catalyst Component (2): an **organic aluminum compound**; and Catalyst Component (3): at least one compound selected from the group consisting of **aromatic carboxylic acid esters** and organic silicon compounds containing at least one organic group selected from the group consisting of a Si-O-C group and a mercapto group and the propylene homopolymer or propylene-olefin copolymer composition has a relationship between melt tension (MS) at 230°C and melt flow rate (MFR) measured under a load of 21.18 N at 230°C as follows: $\log (MS) > -0.76 \times \log(MFR) + 0.45$ (claims 1-2, 7, 9 -10, 12, and 16). Saito et al. further disclose that the composition further comprises various additives such as inorganic or organic fillers and the composition can be processed into **molded product by foaming** (page 34; page 49-Industrial Applicability). Thus, the present claims are anticipated by the disclosure of Saito et al.

6. Claims 1-2 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Takaoka et al. (US 6,306,973).

Takaoka et al. disclose a polypropylene copolymer resin comprising (A) 10-50 wt% of a higher molecular weight polypropylene having an **intrinsic viscosity $[\eta]$ of 6-13 dl/g** determined in decalin at 135°C; (B) 10-89 wt% of a lower molecular weight

polypropylene having an **intrinsic viscosity $[\eta]$ of lower than 6 dl/g** determined in decalin at 135°C; and (C) 1-40 wt% of an ethylene/ α -olefin copolymer having an intrinsic viscosity $[\eta]$ of 0.1-13 dl/g determined in decalin at 135°C, wherein the copolymer resin has (A) a melt flow rate (MFR) of 0.01-5 g/10 min determined at 230°C under a load of 2.16 kg and (B) a molecular weight distribution (M_w/M_n) of 6-20 determined by gel permeation chromatography (GPC) and an M_z/M_w of at least 3.5 and wherein the polypropylene copolymer resin is obtained by polymerizing the monomers in a multistage polymerization of at least three stages in the presence of a polymerization catalyst (claims 1 and 8). Thus, the present claims are anticipated by the disclosure of Takaoka et al.

7. Claims 1-2, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Imai et al. (US 6,251,997).

Imai et al. disclose a polypropylene resin composition comprising (A) 5-25 wt % of a higher molecular weight polypropylene having an intrinsic viscosity $[\eta]$ in the range from 6 to 11 dl/g determined in decalin at 135°C and (B) 95-75 wt% of a lower molecular weight polypropylene having an intrinsic viscosity $[\eta]$ in the range from 0.6 to 1.6 dl/g determined in decalin at 135°C, wherein the resin composition has (1) an isotactic pentad fraction (mmmm-fraction) of at least 96.5% determined by $^{13}\text{C-NMR}$, and (2) a molecular weight distribution (M_w/M_n) of at least 8 determined by gel permeation chromatography (GPC) (claim 1). Imai et al. further disclose that the resin composition is obtained by a continuous multistage polymerization and further

comprises an inorganic filler (claims 3-4). Imai et al. furthermore disclose that the polypropylene resin composition can be processed into an injection molded article (claim 9). Thus, the present claims are anticipated by the disclosure of Imai et al.

Claim Rejections - 35 USC § 102/103

8. Claims 3-4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Saito et al. (WO 98/45368).

The disclosure of Saito et al. is adequately set forth in paragraph 5 and is incorporated herein by reference. However, Saito et al. are silent on the other claimed properties. In view of the compositions of the present claims and the disclosure of Saito et al. being substantially identical, the composition would possess the claimed properties. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

9. Claims 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Takaoka et al. (US 6,306,973).

The disclosure of Takaoka et al. is adequately set forth in paragraph 6 and is incorporated herein by reference. However, Saito et al. are silent on the other claimed properties. However, Takaoka et al. are silent on the other claimed properties. In view of the compositions of the present claims and the disclosure of Takaoka et al. being substantially identical, the composition would possess the claimed properties. Since the

PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

10. Claims 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Imai et al. (US 6,251,997).

The disclosure of Imai et al. is adequately set forth in paragraph 7 and is incorporated herein by reference. However, Saito et al. are silent on the other claimed properties. However, Imai et al. are silent on the other claimed properties. In view of the compositions of the present claims and the disclosure of Imai et al. being substantially identical, the composition would possess the claimed properties. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Ling-Siu Choi/

Primary Examiner, Art Unit 1796

June 5, 2009

Application/Control Number: 10/594,768
Art Unit: 1796

Page 9